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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,135	11/28/2001	Tom Perlich	271602-1010	3073

7590

10/03/2003

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EXAMINER
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HOEY, BETSEY MORRISON

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p>Application No.</p> <p>09/996,135</p>	<p>Applicant(s)</p> <p>PERLICH ET AL.</p>	
	<p>Examiner</p> <p>HOEY, BETSEY</p>	<p>Art Unit</p> <p>1724</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-34 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |                                                                                              |                                                                             |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Constantine et al., U.S. Patent No. 6,500,345 (abstract; Figure 6; column 6, lines 1-5; column 7, lines 28-32). Constantine et al. teach an apparatus and method for treating ship ballast water comprising a chemical biocide mechanism having a metering device for injecting a biocide into the water within a tank, or vessel. It is submitted that it is well-known in the art of chemical water treatment that a metering device is used to control the dosage, or amount, of a treatment agent. By controlling the dosage of the biocide within the tank, the apparatus of Constantine et al. inherently controls the biocide concentration and amount of biocide in the water as recited in the instant claims.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Constantine et al. (see above). Constantine et al. disclose the apparatus described above. The claims differ from Constantine et al. by reciting a biocide

generation system (claim 3), and an organism control program (claims 7 and 10). It is submitted that although Constantine et al. does not mention a biocide generation system or organism control program, Constantine et al. are concerned with controlling organisms with the use of a biocide. The biocide means of Constantine et al. may be a UV irradiation means, which is known to generate agents within water that act to kill microorganisms. Therefore it would have been obvious to one of ordinary skill in the art of water treatment, at the time the present invention was made, to have included a biocide generator with the UV irradiation means of the apparatus of Constantine et al., in order to aid in treating the contaminated water. It is also submitted that while Constantine et al. do not use the term "organism control program", their apparatus is intended to control organisms. One of ordinary skill in the art would have been expected to check the effectiveness of the apparatus of Constantine et al. when in operation by assessing the concentration of organisms in the treated water and adjusting operation parameters accordingly. Therefore, it would have been obvious to one of ordinary skill in the art of water treatment, at the time the present invention was made, to have included an organism control program in the apparatus of Constantine et al., in order to ensure the efficiency of its operation.

5. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 11-34 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4-6 would be allowable if rewritten in independent form including all of the limitations of claims 1 and 4, because the prior art of record fails to teach, disclose, or fairly suggest a ballast water treatment system comprising a control system for controlling the concentration of a chlorine dioxide biocide in the ballast tank system.

Claims 11-24 are allowed because the prior art of record fails to teach, disclose, or fairly suggest a method of controlling organisms in ballast water of a vessel comprising treating the water with chlorine dioxide.

Claims 25-28 are allowed because the prior art of record fails to teach, disclose, or fairly suggest a ballast water treatment system on a computer-readable medium for controlling organisms in ballast water of a vessel comprising logic configured to enable the ballast water to be treated with chlorine dioxide.

Claims 29-33 are allowed because the prior art of record fails to teach, disclose, or fairly suggest a system for controlling organisms in ballast water of a vessel comprising means for treating the ballast water with chlorine dioxide.

Claim 34 is allowed because the prior art of record fails to teach, disclose, or fairly suggest a biocide generation system comprising a fireproof, waterproof container including an intake valve for receiving motive water, arranged such that the motive water is capable of creating a vacuum to facilitate the mixing of precursor chemicals from a plurality of storage tanks in a reaction tank to form a biocide.

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8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsey Hoey whose telephone number is (703) 305-3934. The fax phone number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

*Betsey M. Hoey*  
BETSEY MORRISON HOEY  
PRIMARY EXAMINER

September 29, 2003